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ABSTRACT

While teachers of writing and related disciplines have become increasingly convinced of the value of computers in classrooms, there have also been reports of obstacles that arise when innovating with computers and word processing in the schools. Educators must determine whether the problems are mere inconveniences or potential barriers to the successful implementation of computers as writing tools. Among the difficulties and related observations are the following: (1) computer instruction at the high school level tends to be about the computers themselves rather than using computers to teach content area subjects; (2) teachers and administrators need to collaborate concerning pedagogical applications of computers; (3) teachers also need to collaborate with students about their needs in computer-based writing classes; (4) teachers require opportunities and incentives to acquire the skills it takes to understand and teach with computers; (5) teachers must decide the role of the computer in their classroom (i.e., drill and practice or composing tool); (6) students and teachers both must adjust to the interactive nature of computer learning; (7) teachers should consider whether to use other writing software in addition to word processing, such as outlining, spelling, and style software; (8) administrators need to create ongoing inservice programs designed to be responsive to computer-using English teachers; and (9) educators can choose to view change caused by using computers as liberating rather than threatening. (Seven references are appended.) (SKC)

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Teaching Writing with Computers: Are We Being Realistic?

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Ever since the microcomputer came on the market in the late 70s professional writers have written prolifically about their engagement with word processing. In fact, teachers of writing, of English as a Second Language, and of most subjects across the curriculum, are increasingly convinced that there is value in having their students write with computers. But when we talk about computers in classrooms, when we talk about computers replacing pencils, are we being realistic? Amidst the rising tide of enthusiasm, few reports venture to point out the obstacles that composition teachers encounter, when innovating with computers and word processing in the schools.

This paper looks at the problems and asks whether they represent mere inconveniences or whether they represent potential barriers to the successful implementation of computers as writing tools. If, indeed, they are barriers, then as concerned educators we have a responsibility to recognize and understand the complexity of the issues

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involved in order to create strategies for addressing them. Otherwise, effective applications of computers as writing tools may remain idiosyncratic, restricted to a limited number of teachers and schools, rather than becoming the norm in instruction.

The Need for Change

When we talk about pedagogical applications of computers, we are talking about change. However, our schools are notorious guardians of the status quo. On the other hand, society expects that our schools are preparing children to live successfully in a rapidly changing world. To be meaningful, education must be responsive to society's evolving needs. And, to some degree, it has.

Increasing numbers of schools are purchasing increasing numbers of computers. But what has really changed in the English classroom? Apparently not much. The Second National Survey of Instructional Uses of School Computers, which gathered information from more than 10,000 teachers and principals in a sample of over 2,300 U.S. elementary and secondary schools during the Spring of 1985, reveals that, rather than tapping into the computer's power as an "instructional medium or a productivity tool," computer related instruction in high schools is most often <u>about</u> the computer (Becker, Issue 1, 3). This finding would seem to exclude the use of computers as tools for writing.

In fact, when we specifically look at the use of word processing for writing, we see word processing in high school occurs most often in business education courses (Becker, Issue 3, 4), where students learn to copy and format documents, rather than in English classes where instruction encompasses composing, revision, editing, and publishing strategies related to the creation of original pieces of writing. Yet, despite the small percentages of high school English teachers using word processing, those who do use it report highly positive results.

> Sixty-nine percent indicated that students had improved their writing, editing or proofreading skill by using computers--a greater consensus than for any other 'effect' for any subject at any grade level. (Becker, Issue 3, 13)

The biggest upheaval to introducing word processing into English classes appears to lie, not in the decision to purchase computer equipment, but in the many other issues related to computers and education.

Public schools are traditionally paternalistic places. Authority, for the most part, is hierarchical. Administrators dominate teachers who are rarely consulted about school rules, regulations, or changes. Unfortunately, teachers frequently relate to students in a similar fashion. We are seeing evidence, however, that the computer brings about changes in the traditional dynamics of power and

authority, both between administators and teachers and between teachers and students.

Administrators and Teachers Must Collaborate

The need for greater collaboration between administrators and teachers appears to be essential. An all-powerful administrative authority which lacks expertise concerning the pedagogical applications of computers can have devastating results. Many schools are learning this the hard way. Failure to include computer-using teachers in the decision-making process has meant that districts must now devise creative ways to use the expensive, yet inappropriate, computer hardware and/or software they purchased without teacher input.

I interviewed one superintendent in a school district that had acquired a large number of computers through grant money the year before. Most periods of the day, the high school computing center sat idle, although teachers were free to sign up to use the room. I asked the superintendant why there were no in-service programs, master teachers, curriculum coordinators, or other options available to help teachers learn effective ways of integrating computers into their courses. He responded, "If we encourage teachers to use this equipment, what do we do when we don't have enough computers to go around?" His fear that he would be unable to successfully devise strategies for the allocation of this

scarce resource encouraged him to do nothing toward helping teachers use the equipment that was already in place.

When I asked the principal of the high school why he thought teachers were not using the computers, he replied, "There's no reason except they're afraid! Teachers are afraid to try anything new." I suggested that their fears might be well-founded, since teachers need opportunities to become comfortable with the equipment and to discover approaches that would meet their pedagogical goals before introducing computers to 30 or 35 students in a class.

I asked him what plans, if any, he had to assist interested teachers in gaining computer expertise. "If they want to, they're free to take computer courses at the colleges around here. If a teacher wants to learn to use computers, he'll figure out how to do it," he replied. Many teachers, of course, because of their anxieties, would not seek out such courses. However, by scheduling workshops in the school and giving released time, extra pay, or other incentives to those involved, school districts can meet the needs of interested teachers and provide more hesitant individuals with an encouraging nudge.

Unfortunately, these reactions are not isolated. At an advanced workshop in using computers in the English class during the 1986 National Council of Teachers of English Conference, over half of the 50 participants indicated that administrators at their schools failed to support their

efforts to integrate computers into English curricula (Bernhardt, et al). The underlying attitudes revealed in these administrative approaches have profound implications for the success of computers as writing tools in our schools.

As long as administrators lack insights into the pedagogical value of computers as writing tools and as long as they control the allocation of these scarce resources, they can seriously impede the efforts of English teachers. The traditional hierarchy of power needs to be modified to include teachers in the decision-making process.

This is necessary for two reasons. First, it is not administrators but innovating teachers who lead the way to reform by changing what goes on within their classrooms. Secondly, computer decisions are costly; mistakes are expensive and usually have long-lasting consequences. For change to take place, administrators must collaborate with computer-using English teachers.

Teachers and Students Collaborate

Just as the roles between administrators and teachers must be changed so must the role between students and teachers. And there is some preliminary evidence that computers actually foster this change. One study, conducted by Cynthia L. Selfe and Billie J. Wahlstrom at Michigan Technological University, found that the use of computers as

composing tools intensified collaborative relationships among faculty and students by establishing new patterns of sharing information about writing (289).

> Both teachers and students indicated that the traditional boundaries existing between the two groups began to break down when individuals came together to compose in a computer lab or workspace. (290)

A similar result was discovered by Stephen A. Bernhardt and Bruce C. Appleby in a survey they conducted of professionals using computers for writing, 65 per cent of whom were teachers. Much to the surprise of the investigators, they found that 13 per cent of the respondents identified their students as "their primary collaborators on writing projects" (34).

My own research, a two-year ethnographic study of a high school writing class that I taught using word processing, also reveals, among other things, the changing role relationships between the teacher and the students.

> There were transitions from a traditional, teacher-dominated classroom to an experimental, student-centered classroom; from the teacher as expert to the teacher as a learner among learners; from instruction as segmented, sequenced, and linear to instruction as holistic, simultaneous, and interactive; from writing as comfortable and familiar to writing as uncomfortable and strange; from writing as fixed to writing as fluid; from writing as product to writing as process; from writing as private and individual to writing as public and collaborative; from writing as school-sponsored to writing as self-sponsored; from writing as work to writing as play. (324-325)

A greater degree of mutual support and a greater amount of collaboration, as opposed to the traditional hierarchies between teachers and students, appears to occur when computers are integrated into writing instruction in our schools.

Teachers Need Opportunities to Acquire Skills

Teachers can easily be given opportunities and incentives to acquire the skills it takes to understand and use computer equipment. They need to learn how to adapt the computer to their own needs and to explore pedagogical approaches appropriate for their students. Otherwise, only very dedicated computerphiles will have the necessary interest and expertise to teach using computers and to make informed decisions about the selection and use of equipment and software.

For example, it takes writers a while to become comfortable with the range of possibilities offered by their word-processing program, especially to be able to automatically call upon the procedures as they work. Integrating procedures, such as block moves, into one's writing process is facilitated with instruction, practice, and follow-up help. Without help, most teachers are unlikely to teach using computers.

But what about English and language teachers who are comfortable with the use of computers, who have enthusiastic

administrative support, and who have hardware and software that meets at least their minimum needs? Are their problems over? Unfortunately, they are not.

Other Issues

Teachers face other complex issues. They need to decide, for example, what role the computer will play in their classroom. Will it consist largely of computer-assisted instructional programs (CAI) that drill students in isolation from the process of writing in areas such as grammar, mechanics, punctuation and the like? Such uses are controversial and increasingly questioned by writing theorists, researchers, and teachers. Or will teachers concentrate on having students use the computer as a tool, for example to compose whole texts using word processing? If so, will the basics of the word-processing program be introduced in isolation from writing, or will word-processing and writing instruction be integrated right from the start? The teacher must decide what specific classroom activities will best serve his or her students' writing needs.

Learning to write with computers is an interactive process and, therefore, not linear. The teacher, especially in the early stages of the course, may have as many students or groups of students needing help as there are computers in the room. Students of all ages tend to forget newly learned

skills, if they do not use them immediately and repeatedly. If we want our students to do more than use the computer as a fancy typewriter, they need to have a good deal of writing time using the computers, ideally every day for a period of several weeks. Classes should be small (15 to 20) and the ratio of students should be no more than two students per computer. The teacher then may readily interact with students individually and in small groups concerning both the problems that arise using the software and hardware and the issues pertaining to writing instruction.

Teachers who structure their writing courses around the use of word processing must still decide to what extent they will include additional software designed to support the writing of whole texts. There are programs, for example, that assist writers' invention strategies, outlining abilities, and poetry and fiction writing skills. There are others that evaluate aspects of style, usage, and spelling. Unfortunately, some programs intended as a support for writing are not yet compatible with any word-processing program, making their use problematic. Some programs take a good deal of time to learn. Others give students a complex array of information, which may not be helpful to students at certain levels of writing development.

Teachers must learn to weigh the program's potential value against other factors, particularly the additional time students must spend using it. In many cases, the

prudent choice may be to forgo such programs in favor of maximizing students' time writing with word processing.

Maximizing the Possibility of Success

There is an increasing need for teachers, administrators, and students to acknowledge the problems forthrightly and to work together in search of viable solutions. In education's rapidly changing electronic world, classroom teachers in general and English teachers in particular require extensive classroom support. Computers make new demands on English teachers to make changes in themselves as teachers, to learn more, to work harder, and to be more creative. The vast majority of classroom teachers are greatly overworked; they do not have the time necessary to meet all of these demands. Novice computer-using teachers and experts alike need support systems that will provide them more time and that will assist them in carrying out the activities that they cannot be expected to do alone. Such support needs to provide assistance in extending their evolving levels of expertise, to make instructional information and materials available, and to provide assistance for the myriad problems unique to an electronic classroom.

Administrators, with the assistance of faculty members, need to create ongoing in-service programs designed to be responsive to computer-using English teachers. In

addition, schools should have committees of computer-using teachers that meet regularly with administrators to create appropriate policies. Districts must create new positions of leadership and revamp the qualifications and duties of existing administrative positions. Computer-using English teachers within the school should be promoted or, if necessary, English teachers with computer expertise hired, to fill some of these positions. There should be master teachers with computer expertise who have release time to assist other teachers. Superintendents, principals, vice-principals, curriculum coordinators, and department chairs should be asked to take courses and become knowledgable about the humanistic applications of computers, including the use of computers as writing tools.

Viewing Change as Liberating

Educators can choose to view change as either threatening or liberating. Education's successful leap into the technological age requires much more than the purchase of greater numbers of computers. Significant modifications must be made in the way things have always been done. As educators we cannot refuse to address the emerging problems, unless, of course, we do not intend to meet the challenges of this era. For without the informed and collaborative efforts of educators, it is unlikely that the conditions

necessary for profound, rather than cosmetic, change in the use of writing with computers will occur in our schools.

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